

### **Abstract**

Following the disintegration of the USSR the agro-processing enterprises as well as lands underwent privatization, which caused serious problems for the units involved in agriculture. A reliable mechanism needed to be triggered to incorporate and further utilize the abilities of farmers and research institutions to address the created situation. For this purpose, “Technology Assessment Programs” (TAPs) are being implemented through the funds from the RESCAD Project. The TAPs are tailored to:

- (i) satisfy farmers needs to improve the quality of their production via installation of new technologies, and promote effective cooperation between researchers, advisers and farmers;
- (ii) organize trainings designed for the set-up and use of new technologies.

**Keywords:** Farm and Community Level, Rural Business and Agro-Processor Level, New Technologies, Three-Side Trainings, Farmer Field Schools

The Republic of Armenia (RA) is situated at the crossroads between Europe, the Former Soviet Union, and the Middle East. Armenia is a small landlocked country covering an area of 29,8 sq. km in the Caucasus Region and shares borders with Georgia, Azerbaijan, Turkey and Iran. Administratively, the country is divided into 11 provinces, called Marzes, including the capital of the RA Yerevan, which has the status of province.

For the one-third of the population that lives in rural areas, agriculture is the main source of livelihood.

It is well known that the agricultural sector of economics in RA was and now is well behind from other developed countries of America and Western Europe. It must be acknowledged anyhow that this was resulting not only from the shortcomings of the administration system, state monopoly and management styles, but from the incomplete system of scientific and technical provision of the agricultural sector as well. The consequence was that our own and international achievements in science, especially new technologies, were not widely introduced.

It must be noted that in this hard transition period many countries and international organizations offered their aid to Armenia. In 2005, the World Bank and the Armenian Republic signed a “Loan Agreement” and have been successfully implementing the “Rural Enterprise and Small-Scale Commercial Agriculture Development” Project (RESCAD) in Armenia. The overall objective of the project is to support the development of Armenia’s small and medium-scale rural businesses by imposing the ability of farmers and rural entrepreneurs to access markets and by stimulating market-oriented private and public investments in rural areas. The project consists of four components and has a three-tiered approach by addressing critical gaps at the farm level, at the community level and at the rural business and agro-processor level.

Armenia, even before the collapse of the Soviet Union (since 1991) has been implementing reforms in the agricultural sector. The most important element of the reform was the privatization of land and of other main means of production. Later, the agro-processing

enterprises and the agro service sphere as a whole underwent privatization. Following the implementation of reforms in agriculture the private ownership of land became prevalent in Armenia. Also, economic and legal relations in the agro-industrial sector have changed drastically.

The introduction of new technologies in agricultural production is a permanent process conditioned by the scientific and technical progress, also structural, organizational and technological changes in the agricultural production and the market situation.

The renovation of the agricultural production technology becomes more important in terms of market economic relations and free business activity. At the same time the privatization of land and the agricultural reforms dictate their features to the exposure of requirements for new technologies, their elaboration and introduction.

Therefore, a reliable mechanism needed to be triggered to incorporate and further utilize the abilities of farmers and research institutions to address the created situation. This required seeking for modern approaches and developing new systems based on the mutually beneficial utilization of farmer and researcher resources.

That is why, for the first time in Armenia, on the initiative of the Ministry of Agriculture of Armenia, the “Technology Assessment Program”(TAP) is being implemented, funded through the budgets from the RESCAD Project, including a contribution by the RA Government as well as by farmers. This project is targeted at:

1. creating mechanisms for on-farm installation, comparison and assessment of new and existing technologies,
2. diverting the entire agricultural science on the identification of priority technology needs of farmers through effective use of its potential,
3. promoting effective cooperation between researchers, specialists, extension agents and farmers.

The essence of implementing the co-financed TAPs lays in the fact that the projects should be selected in view of farmer needs, as well as resources available in the regions and the possibilities for implementation. All organizational and listed issues are decided on and implemented by 10 Marz Agricultural Support Centers (MASC), with the support of the Republican Agriculture Support Center (RASC), aimed at the enhancement of agricultural production capacity, efficiency and incomes of farmers, agribusiness owners and their associations in the region through effective delivery services.

Summing up the implementation process of TAP projects, it must be noted that they served as a new impulse for the development of agricultural production and helped:

1. farmers to evaluate new and existing technologies that respond to their priority needs and problems in normal on-farm conditions;
2. researchers, MASC specialists and extension advisers to teach farmers to evaluate the technology options in the region by organizing trainings, including seminars and field days;
3. to provide MASC specialists with a unique opportunity to cooperate with researchers of scientific institutions for bringing research-based technologies directly to farmers;
4. to provide researchers with an opportunity to learn about farmer needs and evaluate their technologies at the farm level.

Also, the RESCAD Project funds a number of applied research and demonstration activities designed to involve farmers, advisers and researchers in a process of technology assessment aimed at the provision of concrete evidence of improved farm practices and technologies that will offer economic benefit to farmers in the short to medium term.

The traditional technology transfer model envisaged research providing new knowledge and technologies via trainings designed for three major categories, *inter alia*, researcher-to-adviser, adviser-to-farmer and farmer-to-farmer. However, this approach of technology transfer was mainly suited to larger, mechanized and commercial farms. In those situations where farm size is small and where farmers are poorer and less commercial, it was recognized that other approaches needed to be developed. Two of these approaches, namely *participatory technology development and farmer-to-farmer teaching*, led to the development of the FFS (Farmer Field Schools) methodology. In Armenia the FFS approach was first introduced through support from the USDA Marketing Assistance Project with two successful Farmer Field Schools in 2003 and 2004.

In 2007, the Green Lane Agricultural Assistance NGO which has previous experience in the field of establishment and development of farmer groups and cooperatives was involved in a new project committed to establish and develop Farmer Field Schools in Armenia. Initially, through support from the RESCAD Project, a pilot program is being implemented under this new project, with 8 Farmer Field Schools founded in two Regions of RA (8 villages, 120 participants) for further scaling up to other Regions in 2008 and 2009.

The purpose of the Project is to give farmers an opportunity to improve the quality of their production and ensure market access. This form of farmer cooperation not only promotes economic stabilization of farms both small in size and relatively poor in resources, but contributes to the social and economical development of rural communities as well. At the community level, formation and development of farmer groups can help solve an important problem of increasing the participation of farmers (especially small and medium scale farmers) in the process of the local resource management and decision-making.

Thus, training of farmer groups with use of informal educational methods (in-field training programs) is considered to be the basis of formation and development of farmer groups, including FFSs.

Being based on participatory technology development, Farmer Field Schools mainly utilize the skills, knowledge and information inherent in the farming community that they serve. Basically, the FFS methodology involves trainers and farmer groups working together throughout the season in an interactive fashion, which has proved effective and popular with farmers and is well-suited to the present small farming structure of RA. Thereafter, the concept of FFSs establishment depends more on the mobilization of local communities, networking and participation. For FFSs, the concept of three-side trainings described above works almost on the same principles inherent in TAPs. However, in the first case the researcher acts as a Consultant and the direct correlation then develops between consultant-to-trainer/facilitator, facilitator-to-farmer and farmer-to-farmer.

Henceforth, this is said to be a sizeable effort, which will provide information and knowledge to the farmers directly involved in programmes, thereby enabling them to teach one another on the ways to address more global problems occurring in their activities.